

Entanglement

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The book was a disappointment and somewhat of a joy. I thought the book being totally devoted to entanglement would present the phenomenon in as clear a manner as possible to those with some physics knowledge or those just curious. The subject was presented in brief spurts under the assumption that the reader had considerable knowledge of it. The subject got more attention near the end of the book in a chapter entitled "triple entanglement". I could not make sense between the second drawing presented in that chapter and the discussion concerning it. I gave up after that.

I do not like books on the history of science. I have read some and they were interesting. But, how many times does one have to read the history of the same people? This book was more a story on the history of those who were involved in entanglement and how knowledge of it evolved. As such it was quite good. The author not only presented the contributions of those involved, but he gave some tabloid information also making them more human. In the sense of the history behind entanglement and those involved, the book was worth the read. To understand what is known about entanglement and have it presented in all its mystery at a lower level was not a mark the book hit.

Now for a question by a low lander, that is those who hike the lower elevations of the science world. If electrons are projected through a slit unto a wall they form a diffraction pattern according to the rules of quantum mechanics. Protons will do the same forming a different diffraction pattern as will hydrogen atoms. A hydrogen atom is composed of an electron and a proton. When a hydrogen atom goes through the slit an electron and a proton go through at the same time. The electron and the proton encounter the wall at the same place at the same time. Neither do their own thing. Are the electron and the proton considered entangled?

The complex wave function of the hydrogen atom is that of the hydrogen's electron multiplied by that of the hydrogen's proton. A simple relationship relates the wave functions, but the behavior of the electron and the proton going through the slit no longer exists. Only the behavior of the hydrogen atom is observed. Does the behavior of the electron and proton act at all? Is there any touching or pushing within the hydrogen atom as it

transverses the slit? If an atom with a half life transverses a slit is there a toughing and pushing within the atom that will encourage or discourage decay? I find it curious that the complex wave function of an entity going through a slit is the product of the complex wave functions of the parts of the entity. Is this entanglement?

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